

# **A way forward for Gender Mainstreaming of women in Science and Technology Sector**

## **Department of Science and Technology**

The Department of Science and Technology has completed 40 years of service to the S&T sector in the country, during this period the department has focused its efforts on supporting and strengthening human resource, enhancing institutional capacity in basic and applied research, technology development & deployment, fostering international bilateral and multilateral cooperation, attracting talent to the science sector and to careers in research and providing S&T solutions to problems at the grassroots. Gender initiatives have also formed an integral part of the activities of the department and are aimed at creating an enabling environment for women scientists to actualize their potential and contribute to nation development.

In India in the past the challenges for women in science sector have been cultural, social, family & profession related and lack of career opportunities. In the cultural and economic setting of India, until recently, access to higher education was also limited for the girl child. Though it may apparently seem that the critical mass of women scientists at the highest level is low and the current situation of gender balancing in the Indian Research and Development sector is not complimentary, but with a vast talent base and youth population, India can foresee a strong opportunity for building a strong base in Science and Technology sector. This can be achieved with special initiatives to enhance numbers of women scientists on one side and retain and enable the once already in the system through well structured schemes. By addressing the gender parity challenges in Research and Development Sector India can accelerate the pace of country's development. There is a strong motivation for India to invest into talented women scientific and technologist base in a planned manner, with a mind-set of leveraging their potentials and knowledge strength into the developmental processes of the country. This is a new way forward. The Department of Science and Technology has accordingly named its initiatives "**DISHA**", which means **the Way Forward**.

### **Proactive Gender Enabling Schemes Initiated by DST**

The Science and Technology Policy, 2003 clearly enunciates its commitment to promote the empowerment of women in all science and technology based activities and ensure their full and equal participation.

The Department of Science and Technology adopted the Women Component Plan in 2002 with a separate allocation for compliance and implementation of various government led programmes under gender budgeting. Since then the Department of Science and Technology has been spearheading several pioneering initiatives with an aim to bring gender parity in science. This has given the much needed boost to women oriented initiatives at national

level. The following women oriented schemes are proactively managed by the Department of Science and Technology:

1. ***Re-entry Opportunity for Women in Research and Development Sector:*** A first of its kind fellowship scheme for women scientists, was started in 2002, aims to bridge a break in career that women face in view of family responsibilities. The scheme has successfully provided more than 2500 women scientists an opportunity to re-enter science and technology fields during the last ten years. This program has enabled women scientists who are not in fulltime employment to undertake project based activities in the S&T field. The scheme is operational in two key areas to suit individual aptitudes 1) fellowship for research in basic and applied science, 2) fellowship for S&T inputs to address issues at the grassroots.
2. ***Capacity Building and Training:*** Capacity building program of the Department of Science & Technology (DST) is being implemented by the Patent Facilitating Centre of Technology Information Forecasting & Assessment Council (TIFAC) since 2002. The program aims to train women having qualifications in science/ engineering / medicine or allied areas in the area of intellectual property rights (IPR) and their management for a period of one year. The scheme encourages women to work from their homes, enabling them to draw a good balance between professional and domestic demands. A total of 310 women have been trained till date under this scheme, out of these 168 are working in scientific field and 119 have been well established as patent agent.
3. ***Entrepreneurship Development:*** The education policy of 1986 emphasized the need for vocationalisation of education at various levels which made it necessary to develop mechanisms for academic institutions to focus their attention on entrepreneurship & self-employment in addition to their present mandate of churning out trained manpower. With changing entrepreneurial landscape and emerging opportunities in India, young technocrats are now open to exploit their full potential by setting up their own ventures thus becoming “job generators” rather than “job seekers”. The Department of Science & Technology, Government of India, had set up Science and Technology Entrepreneur’s park (STEP), Technology Business Incubators (TBIs) Innovation and Entrepreneurship Development Cells (IEDCs) in educational institutions to support these young budding entrepreneurs. DST has supported over 130 STEP, TBIs, EDCs and IEDCs. To nurture the women entrepreneurs, DST has developed over 48 STEPs in the country in women only academic institutes. The initiative will directly involve these women entrepreneur to the economic development of the country.
4. ***Nourishing pipe line of Women Scientists by Strengthening R&D Infrastructure:*** A scheme Consolidation of University Research, Innovation and Excellence (CURIE) was launched by DST in 2008, to strengthen the R&D infrastructure of women-only

universities. Under this scheme all the six women-only universities in India have been supported for enhancing their research facilities.

5. ***Refresher Training Courses for Scientists as Career Advancement Measure:*** The training programme for working women scientists covering multifarious themes in partnership with premier national level institutes has provided an opportunity to over 900 women scientists to upgrade their knowledge base and skills.

The above schemes have managed to transform the landscape of the Indian Science and Technology steadily during the last ten years since its inception. The number of successful women Project Investigators has increased significantly since 2000. The percentage share of women PIs in Extra Mural Research has increased from 13% in 2000 to 31% in 2009 (*Source: DST Annual Report 2011-12*). While competitiveness of women investigators in Extra Mural Research is improving, enabling ecosystems for increased gender parity in Indian science sector have remained the National priority of the Government of India. The Department of Science and Technology have taken steps further to nurture the ecosystem by taking up new initiatives to address the challenge of mobility which hampers women in their continuation, retention and sustenance of the professional career.

### **New Initiatives of the Department of Science and Technology**

1. ***The New Mobility Scheme for Employed S&T Manpower:*** Women in the socio cultural setting of the country continue to play a major partner in home making and breaks in the early career are not uncommon. Re-entry into the R&D sector after family related breaks has not been easy on account of the nature of R&D as a profession in spite of enabling schemes. When families are needed to move from one city to another, finding two jobs in the new location is often difficult and it is almost always the women who compromise career opportunities. Mobility challenges affected women more than men in the Indian R&D sector.

In order to retain qualified women employed within the Indian S&T sector, this new initiative to increase mobility and retention of employed women scientist is proposed in the 12<sup>th</sup> five year plan. The scheme proposes to create 1000 super-numerary and contractual positions with portability within India for creating opportunities for overcoming lateral entry challenges for women.

2. ***DISHA-Science Communicators:*** The initiative is a notion for the women who have the scientific degree and can contribute to popularize science and technology among the masses and stimulate a scientific and technological temper among people through S&T communications in different languages. The scheme will provide opportunity to:
  - (i) Women scientists to work from home/part-time as a science communicator.
  - (ii) Women scientists to interact closely with media organizations.

- (iii) The media specialist to get personal experience to recent developments taking place in our laboratories with a view to enhance their effectiveness in communicating scientific knowledge to the people more meaningfully and effectively.

*“DISHA” therefore is a holistic approach to address challenges of gender parity in Indian science sector.*

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